#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

the the application of: Fowlkes, D.M. et al.

erial No.: 09/258,600

Filed: February 26, 1999

For: YEAST CELLS ENGINEERED TO PRODUCE PHEROMONE SYSTEM PROTEIN SURROGATES,

AND USES THEREFOR

Attorney Docket No.: CPI-012CP4DV

Assistant Commissioner for Patents Washington, D.C. 20231

Group Art Unit:

Examiner:

Certificate of First Class Mailing (37 CFR 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal

Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C.

20231 on the date set forth below.

By:

Peter C. Lauro

Registration No. 32,360 Attorney for Applicants

#### INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicants and their attorney are aware of the following publications and information, listed on the attached PTO Form 1449, and in accordance with 37 CFR §1.97 hereby submit these publications for the Examiner's consideration.

References AA-AD and BC-BK were made of record in U.S. Patent No. 5,879,591 (Serial No. 08/461,598) (Atty. Docket No. CPI-012CP4C), of which this application is a Divisional Application and to which this application claims priority. Therefore, in accordance with 37 C.F.R. §1.98(d), references AA-AD and BC-BK are not enclosed herewith, but will be provided upon request.

This Information Disclosure Statement also presents publications cited in an International Search issued on February 18, 1999 during the prosecution of PCT/US98/21168 and a second European Search Report mailed on March 29, 1999 during the prosecution of European Divisional Application No.: 98202997.7 which are related to the

2

above-referenced application. These publications are cited on the enclosed PTO Form 1449, and copies of the European and International Search Reports references AE, AF, AH-AK and AQ-AS are also enclosed. Reference AG was made of record in the parent application and, therefore, in accordance with 37 C.F.R. §1.98(d), reference AG is not enclosed herewith, but will be provided upon request.

This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed per se as a representation that such publication is prior art. Moreover, Applicants understand that the Examiner will make an independent evaluation of the cited publications.

The undersigned hereby certifies references AE-AK and AQ-AS were cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. Accordingly, no additional costs are believed to be due in connection the reporting of these references. In addition, pursuant to 37 C.F.R. § 1.97(b)(3), no additional costs are believed to be due in connection with the filing of this Information Disclosure Statement. If, however, a first Office Action on the merits issues in this application bearing a mailing date prior to the date of this Information Disclosure Statement, please charge the appropriate fee as required under 37 C.F.R. § 1.17(p) to our Deposit Order Account No. 12-0080.

Respectfully submitted,

<del>LAH</del>IVE & COCKFIELD, LLP

Peter C. Lauro

Registration No. 32,360

Attorney for Applicants

28 State Street Boston, MA 02109 (617) 227-7400

Date: May 18, 1999

**Enclosures** 

			Sheet 1 of 2
APPLICANT FACSIMILE OF FORM PTO-1449 REV 7-80	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO	SERIAL NO.
		CPI-012CP4DV	09/258,600
JUST OF PUBLICATIONS	CITED BY APPLICANT	APPLICANT	
O P E Use several shee	ts if necessary)	Fowlkes, D.M. et al.	
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7 40		February 26, 1999	
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US	PAT	FNT	DOCU	MEN	2TL

PRAMINER THE PROPERTY OF THE P	*6	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,096,815	03/92	Ladner et al	435	69.1	
	AB	5,283,173	2/94	Fields et al.	435	6	
	AC	5,468,614	11/95	Fields et al.	435	6	
	AD	5,580,736	12/96	Brent et al.	435	6	

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLA	TION
							YES	NO
	Æ	WO 88/10308	12/88	PCT				
A	₹F	WO 91/12273	8/91	PCT				
A	\G	WO 94/23025	10/94	PCT				
A	Ή	WO 95/30012	11/95	PCT				
A	7	WO 97/11159	3/97	PCT				
A	5	WO 92/05244	4/92	PCT				
A	ŀΚ	WO 98/13513	4/98	PCT				

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

	OTTENO (including Author, Title, Date, Fertinent Fages, Ltc.)
AL	Chien, C.T. et al., "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest," PNAS, 88:9578-9582 (1991);
АМ	Cwirla, S., et al., "Peptides on Phage: A Vast Library of Peptides for Identifying Ligands," PNAS., 87:6378-6382 (1990);
AN	Devlin, J., et al., "Random Peptide Libraries: A Source of Specific Protein Binding Molecules," Science, 249:404-406 (1990);
AO	Fields, S. et al., "A novel genetic system to detect protein-protein interactions," <i>Nature</i> , 340:245-246 (1989);
AP	Gyuris, J. et al., "Cdi1, a human G1 and S phase protein phosphatase that assocites with CdK2," Cell, 75:791-803 (1993);
AQ	Manfredi, J. et al., "Autocrine stimulation of yeast through human G-coupled receptors," J. Cell. Biochem., 18B:224 (1994);
AR	Kang, Y.S. et al., "Effects of expression of mammalian Galpha and hybrid mammalian-yeast Galpha proteins on the yeast pheromone response signal transduction pathway," <i>Molecular and Cellular Biology</i> , 10:2582-2590 (1990);
AS	King, K. et al., "Control of yeast mating signal transduction by a mammalian beta2-adrenergic receptor and Gs alpha subunit," <i>Science</i> , 250:121-123 (1990).
	Date Considered
	Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through

Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

			Sheet 2 of 2
APPLICANT FACSIMILE OF FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE	ATTY DOCKET NO	SERIAL NO.
REV 7-80	PATENT AND TRADEMARK OFFICE		09/258,600
LIST OF PUBLICATIONS C		APPLICANT	
(Use several sheets	s if necessary)	Fowlkes, D.M. et a	
		FILING DATE	GROUP
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## **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANS	LATION
							YES	МО
ı	BB							
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		OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)
	ВС	Koff, A. et al., "Human cyclin E, a new cyclin that interacts with two members of the CDC2 gene family," Cell, 66:1217-1228 (1991);
	BD	Lew, D., et al., "Isolation of Three Novel Human Cyclins by Rescue of G1 Cyclin (Cln) Function in Yeast," Cell, 66:1197-1206 (1991);
	BE	Hughes, D. et al., "Complementation of byr1 in fission yeast by mammalian MAP kinase kinase requires coexpression of Raf kinase," <i>Nature</i> , 364:349-352 (1993);
	BF	Murphy, A.J.M, et al., "Autocrine Stimulation of Yeast Through Human G-Coupled Receptors," <i>J. of Cell Biochem.</i> , 18B:224 (1994);
	BG	Raymond, M., et al., "Functional Complementation of Yeast ste6 by a Mammalian Multidrug Resistance mdr Gene," <i>Science</i> , 256:232-234 (1992);
	ВН	Scott, J. and Smith, G., "Searching for Peptide Ligands with an Epitope Library," <i>Science</i> , 249:386-390 (1990);
	Ві	Whiteway, M., et al., "Dominant Negative Selection of Heterologous Genes: Isolation of Candida Albicans Genes that Interfere with Saccharomyces Cerevisiae Mating Factor-induced Cell Cycle Arrest," PNAS, 89:9410-9414 (1992);
	BJ	Xiong, Y., et al., "Human D-Type Cyclin," Cell, 65:691-699 (1991);
	ВК	Zervos, A. et al., "Mxi1, a protein that specifically interacts with max to bind Myc-Max recognition sites," Cell, 72:223-232 (1993).
	BL	
	ВМ	
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	ВО	
]		Date Considered
<u></u>		Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation

Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.





Office No. <u>CPI-012CP4DV</u>

# THE "RECEIVED" STAMPOP THE PATENT AND TRADEMARK OFFICE IMPRINTED HEREON ACKNOWLEDGES THE FILING OF:

Description of Paper\*: Transmittal Letter (in duplicate), Information Disclosure Statement, PTO Form 1449, European and International Search Reports (2), and full copies of references (9) are enclosed along with this postcard.

Title: Yeast Cells Engineered to Produce Pheromone System Protein Surrogates, and Uses Therefor

Name of Applicant(s): Fowlkes, D.M. et al.

Serial No.: 09/258,600

Atty: Peter C. Lauro

Date: May 18, 1999

\*with Certificate of First Class Mailing



JOHN A. LAHIVE, JR. (1928-1997) THOMAS V. SMURZYNSKI RALPH A. LOREN GIUUO A. DeCONTI, JR. ANN LAMPORT HAMMITTE **ELIZABETH A. HANLEY** AMY BAKER MANDRAGOURAS ANTHONY A. LAURENTANO KEVIN J. CANNING JOHN V. BIANCO JANE E. REMILLARD FAUSTINO A. LICHAUCO DAVID A. LANE, JR. LINDA M. CHINN JEANNE M. DIGIORGIO DEBRA J. MILASINCIC, Ph.D. NICHOLAS P. TRIANO, III

TIMOTHY J. DOURC.
WILLIAM D. DeVAUL
SENIOR COUNSEL
W. HUGO LIEPMANN

JAMES E. COCKFIELD

OF COUNSEL
JEREMIAH LYNCH
LAWRENCE E. MONKS
WILLIAM A. SCOFIELD, JR.
PETER C. LAURO\*
JOHN L. WELCH
DEANN FORAN SMITH\*\*

\* Admitted in NY only
\*\* Admitted in MI only

PATENT AGENTS
CATHERINE J. KARA, Ph.D.
MEGAN E. WILLIAMS, Ph.D.
REZA MOLLAAGHABABA, Ph.D.

TECHNICAL SPECIALISTS
MARIA C. LACCOTRIPE, Ph.D.
MONICA PALACIOS-BOYCE, Ph.D.
CYNTHIA M. SOROOS
PETER W. DINI, Ph.D.
JENNIFER L. ELLIOTT, Ph.D.
LAUREN C. FOSTER, D.Sc.

May 18, 1999

Assistant Commissioner for Patents Washington, D.C. 20231

Re:

U.S. Patent Application No.: 09/258,600, Filed February 26, 1999

Yeast Cells Engineered to Produce Pheromone System Protein Surrogates, and

Uses Therefor

Inventor: Fowlkes, D.M. et al. Our Ref. No.: CPI-012CP4DV

Dear Sir:

I enclose herewith for filing in the above-identified application the following:

- 1. Information Disclosure Statement;
- 2. PTO Form 1449 (2 sheets);
- 3. Full copies of references (9);
- 4. A copy of the European and International Search Reports; and
- 5. Return receipt postcard.

No additional costs are believed to be due in connection with the filing of this Information Disclosure Statement. However, please charge any necessary fees in connection with the enclosed statement to our Deposit Order Account No. 12-0080. For this purpose, a duplicate of this sheet is attached.

I hereby certify that this correspondence is deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on:

May 18, 1999 Date

Peter C. Lauro, Reg. No. 32,360

Respectfully submitted,

LAHIVE & COCKFIELD, LLI

Peter C. Lauro

Registration No. 32,360

Attorney for Applicants